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FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE, CANCERLIT, JAPIO' ENTERED AT 17:06:05 ON 25 JAN 2005

L1 26 S (COMPLEMENT C3) AND (INSULIN RESISTANCE)
L2 16 DUPLICATE REMOVE L1 (10 DUPLICATES REMOVED)
L3 4 S L2 AND MARKER?

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ANSWER 2 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2004:708363 CAPLUS
DN 141:329868
ED Entered STN: 31 Aug 2004
TI Inflammation, **insulin resistance**, and adiposity: A study of first-degree relatives of type 2 diabetic subjects
AU Kriketos, Adamandia D.; Greenfield, Jerry R.; Peake, Phil W.; Furler, Stuart M.; Denyer, Gareth S.; Charlesworth, John A.; Campbell, Lesley V.
CS Diabetes and Obesity Research Program, Garvan Institute of Medical Research, Sydney, Australia
SO Diabetes Care (2004), 27(8), 2033-2040
CODEN: DICAD2; ISSN: 0149-5992
PB American Diabetes Association, Inc.
DT Journal
LA English
CC 14-8 (Mammalian Pathological Biochemistry)
AB OBJECTIVE - Inflammatory **markers** such as C-reactive protein (CRP) are associated with **insulin resistance**, adiposity, and type 2 diabetes. Whether inflammation causes **insulin resistance** or is an epiphenomenon of obesity remains unresolved. We aimed to determine whether first-degree relatives of type 2 diabetic subjects differ in insulin sensitivity from control subjects without a family history of diabetes, whether first-degree relatives of type 2 diabetic subjects and control subjects differ in CRP, adiponectin, and complement levels, and whether CRP is related to insulin sensitivity independently of adiposity. RESEARCH DESIGN AND METHODS - We studied 19 young normoglycemic nonobese first-degree relatives of type 2 diabetic subjects and 22 control subjects who were similar for age, sex, and BMI. Insulin sensitivity (glucose infusion rate [GIR]) was measured by the euglycemic-hyperinsulinemic clamp. Dual-energy x-ray absorptiometry determined total and abdominal adiposity. Magnetic resonance imaging measured abdominal adipose tissue vols. RESULTS - First-degree relatives of type 2 diabetic subjects had a 20% lower GIR than the control group (51.8±3.9 vs. 64.9±4.6 μmol · min-1 · kg fat-free mass-1, P = 0.04). However, first-degree relatives of subjects with type 2 diabetes and those without a family history of diabetes had normal and comparable levels of CRP, adiponectin, and complement proteins. When the cohort was examined as a whole, CRP was inversely related to GIR (r = -0.33, P = 0.04) and adiponectin (r = -0.34, P = 0.03) and pos. related to adiposity (P < 0.04). However, CRP was not related to GIR independently of fat mass. In contrast to C3 (r = 0.41, P = 0.009) and factor B (r = 0.43, P = 0.005), CRP was unrelated to factor D. CONCLUSIONS - The insulin-resistant state is not associated with changes in inflammatory **markers** or complement proteins in subjects at high risk of type 2 diabetes. Our study confirms a strong relationship between CRP and fat mass. Increasing adiposity and **insulin resistance** may interact to raise CRP levels.
ST inflammation **insulin resistance** adiponectin adiposity diabetes risk; adiponectin C reactive protein diabetes
IT Proteins
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); BIOL (Biological study); USES (Uses)
(C-reactive, inflammatory **marker**; inflammation, **insulin resistance**, and adiposity in first-degree relatives of type 2 diabetic subjects)
IT Cytokines
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); BIOL (Biological study); USES (Uses)
(adiponectin; inflammation, **insulin resistance**, and adiposity in first-degree relatives of type 2 diabetic subjects)
IT Biomarkers (biological responses)
Human
Obesity
Risk assessment

(inflammation, **insulin resistance**, and adiposity in first-degree relatives of type 2 diabetic subjects)

IT Diabetes mellitus
(non-insulin-dependent; inflammation, **insulin resistance**, and adiposity in first-degree relatives of type 2 diabetic subjects)

IT 80295-32-5, Complement C1 80295-41-6, **Complement C3**
80295-48-3, Complement C4
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); BIOL (Biological study); USES (Uses)
(inflammation, **insulin resistance**, and adiposity in first-degree relatives of type 2 diabetic subjects)

IT 9004-10-8, Insulin, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(resistance; inflammation, **insulin resistance**, and adiposity in first-degree relatives of type 2 diabetic subjects)

RE.CNT 51 THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS RECORD

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80295-48-3, Complement C4
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); BIOL (Biological study); USES (Uses)
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IT 9004-10-8, Insulin, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
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